

area and being seen from time to time. For some days the butterfly had a portion of a wing damaged and so it was possible to identify it in several successive appearances.

In view of the facts noted it does not appear likely that Pali Hill is merely a point on a route of local migration. It is possible that there is a seasonal appearance of the butterfly on Pali Hill, a possibility that can only be tested by observations over an extended period.

49 PALI HILL,

BANDRA,

BOMBAY 50,

November 3, 1961.

D. E. REUBEN

17. MASS OCCURRENCE OF THE PREDATORY STINK
BUG, *CANTHECONIDIA (CANTHECONA) FURCELLATA*
(WOLFF.) ON *AMSACTA ALBISTRIGA* WALK.
IN SOUTH INDIA¹

The red hairy caterpillar, *Amsacta albistriga* Walk. (Arctiidae, Lepidoptera), is a very serious pest of the dry crops, especially groundnut, in most of the rain-fed tracts of Madras State. Apart from the record of the parasite *Apanteles creatonoti* Vier. (Ramakrishna Ayyar & Margabandu, 1934) in Mysore, there seems to be no record of any natural enemies on the pest under field conditions in India. Under laboratory conditions the eggs were found to be parasitised by *Trichogramma* sp. in Mysore (Kunhi Kannan, 1931), and the larvae attacked by the pentatomid bug *Cantheconidia furcellata* (Wolff.) in Coimbatore (Cherian & Brahmachari, 1941). Recently, however, during a study tour to the southern districts, the bug *C. furcellata* (Wolff.) was observed in the field to account for considerable mortality of the caterpillars of *Amsacta albistriga* Walk. in Alagarkoil area (Valayapatti village) of Melur taluk in Madurai district. Since this is the first time that it has been found to exercise some natural check on the pest in the field, a short account of the insect is given here.

While studying the recent outbreak of the hairy caterpillar pest on groundnut crop in Alagarkoil area it was observed that many dead

¹ Communicated by the Dean, Agricultural College & Research Institute, Coimbatore.

caterpillars were hanging, head downwards, from the under surface of the leaves of the redgram (*Cajanus cajan* Mill.) plants on which they were found resting after devastating the whole groundnut crop. On examination it was found that the mortality of the caterpillars was due to the attack of the bug *C. furcellata* (Wolff.). A very large number of the bugs were present on the redgram plants, and the last instar nymphs and the adults of the bug were attacking the caterpillars of advanced stage, i.e. from the third instar onwards. The mode of attack was to approach the caterpillar from behind, place the rostrum in between the two anal prolegs, and thrust the stylets into the posterior part of the larva. Most probably the young bugs breed on the redgram plants or weeds in the locality. This is in conformity with the observation of Cherian & Brahmachari (1941) that the bugs feed at first on the plant sap and only later turn their attention to the insect-food.

Cantheconidia furcellata (Wolff.) has a wide distribution. It occurs in Formosa, Malaya, Borneo, Philippines, India, Ceylon, Burma, Java, etc. and is well known as a predator of lepidopterous larvae. In India so far it has been noted from Bihar, Bengal, Calcutta, Ranchi, Bombay, Madras, Coimbatore, Saidapet, Musiri, and Aduthurai. Previous records in India show that it has been noted as predaceous on larvae of *Laphygma exigua* Hb. (Vassiliev, 1914), *Prodenia litura* Fb., *Athalia proxima* Kl. (Ballard, 1922), *Thosea cervina* Moore (Ananda Rau, 1936), *Utetheisa pulchella* Linn. in Central Provinces (Fletcher, 1917), *Hybloea puera* Cram., Tusser silkworms *Antherea* sp. (Distant, 1902), *Semiothisa pervolgata* Wlk., *Terias hecabe* Linn., *Catopsilia pyranthe* Linn. (Cherian & Brahmachari, 1941). Under laboratory conditions (*loc. cit.*) the bug was noted attacking the caterpillars of *Tarache nitidula* Fb., *Earias fabia* Stoll., *Orthaga* sp., *Spodoptera mauritia* Boisd., *Cirphis unipuncta* Haw., *Psalis securis* Hubn., *Euproctis fraterna* Moore, *Argina cribraria* Clerck., *Hypsa sericae* Moore, *Utetheisa pulchella* Linn., *Amsacta albistriga* Walk., *Eupterote mollifera* Wlk., *Stomopteryx nerteria* Meyr., *Sylepta derogata* Fabr., *Schoenobius incertellus* Wlk., *Scirpophaga* sp., *Papilio demoleus* Linn., *P. aristolochiae* Fab., *Acherontia styx* Westw., *Melanitis ismene* Cram., and *Parnara mathias* Fabr. Fletcher (1914) has reported an instance wherein the bug was bred in large numbers and released in cotton and gram fields to check caterpillar attacks on these crops. In the Insect Collections at the Agricultural College & Research Institute, Coimbatore, a few bugs have been collected as predaceous on the larvae of *Athalia proxima* Kl. (Coll: T. V. R. Ayyar, 1912).

Chloridea sp. on cotton (Coll: M. S. Kylasam, 1929), and *Thiacidas postica* Walk. on *Zizyphus* (Coll: T. V. Subramanian, (1936).

Recent researches have indicated that the pest *A. albistriga* Walk. can be controlled by dusting BHC. 10% at its most vulnerable stage, i.e. when the caterpillars are a week old. Spraying 0.05% Parathion to control grown-up caterpillars is practicable only in places where there are water facilities available. Inasmuch as the bug has been previously utilised by breeding and liberating in cotton and gram fields for controlling caterpillar pests of the crops, it may possibly be used in the biological control of the red hairy caterpillar *A. albistriga* Walk.

POST-GRADUATE TRAINING

CENTRE,
COIMBATORE,
October 28, 1960.

B. VASANTHARAJ DAVID
M. BASHEER

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18. STRANGE BEHAVIOUR OF SOME DRAGONFLIES

Chandola is a large irrigation lake three miles south of Ahmedabad situated on the Ahmedabad-Bombay National Highway. Since I started taking an interest in nature study more than thirty years ago, Chandola Lake has been my field observatory for the study and collection of butterflies, dragonflies, and other insects, fishes, birds, and lately spiders. When full of weeds, it is populated by a large number of dragonflies.

I have noticed that, whenever I move on the bank of the Lake on my bicycle, a number of dragonflies fly parallel with my back wheel,